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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

MOORE, KARLA A

ART UNIT PAPER NUMBER

1763

DATE MAILED: 11/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/601,561

Applicant(s)

SHIN ET AL.

Examiner

Karla Moore

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 June 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 15-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 15-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 June 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☒ Certified copies of the priority documents have been received in Application No. 09/884,993.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 0603.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

Specification

1. The abstract of the disclosure is objected to because it does not accurately describe the claimed invention. The current abstract is drawn to a chemical vapor deposition method. The current invention/claims are drawn to an apparatus. Correction is required. See MPEP § 608.01(b).

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 15-17 and 20 rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,795,399 to Hasegawa et al.
4. Hasegawa et al. disclose a chemical vapor deposition apparatus (column 4, rows 9-14) in Figure 3, comprising: a load lock chamber (1; column 4, rows 21-23); a processing chamber (2; column 4, rows 21-23); a vent line (extending from 33; column 4, rows 50-60) connected with said load lock chamber; and an air purge line (extending from 34; column 4, rows 50-60) connected with said load lock chamber, wherein said air purge line supplies air including H₂O gas. Also see column 14, rows 2-10.
5. With respect to claim 16, said air purge line and said vent line are connected to each other (see Figure 3).
6. With respect to claims 17 and 20, each of the vent line and the air purge line are connected (fluidly) to a vacuum pump (21; column 4, rows 38-40).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).
9. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hasegawa et al. as applied to claims 15-17 and 20 in view of U.S. Patent No. 5,735,961 to Shimada.
10. Hasegawa et al. disclose the invention substantially as claimed and as described above.
11. However, Hasegawa et al. fail to teach an O₂ gas line connected to said air purge line.
12. Shimada discloses an O₂ gas line connected to a load lock chamber (and thus is fluidly connected to all other lines connected to the chamber) for the purpose of effecting the generation of a native oxide layer (column 2, rows 50-55, column 3, rows 22-31 and column 4, rows 1-2, 50-53).
13. It would have been obvious to one of ordinary skill in the art at the time the Applicant's invention was made to have provided an O₂ gas line fluidly connected to the air purge line in Hasegawa et al. in order to effect the generation of a native oxide layer as taught by Shimada.
14. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hasegawa et al. as applied to claims 15-17 and 20 in view of U.S. Patent No. 5,879,458 to Roberson, Jr. et al.
15. Hasegawa et al. disclose the invention substantially as claimed and as described above.
16. However, Hasegawa et al. fail to teach a filter connected to said air purge line.
17. Roberson, Jr. et al. teach the use of a filter in a gas supply inlet for the purpose of supplying clean, dry, gaseous working fluid to maintain low levels of moisture, oxygen and particulate content around materials to be processed (abstract).

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18. It would have been obvious to one of ordinary skill in the art at the time the Applicant's invention was made to have provided a filter in the air purge line of Hasegawa et al. in order to supply clean, dry gaseous, working fluid to maintain low levels of moisture, oxygen and particulate content around materials to be processed as taught by Roberson, Jr. et al.

Conclusion

19. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. USP 5,273,423; USP 5,578,129; and USP 6,066,538 each teach load lock chambers with various gas connections.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karla Moore whose telephone number is 571.272.1440. The examiner can normally be reached on Monday-Friday, 8:30am-5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Mills can be reached on 571.272.1439. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Karla Moore
Art Unit 1763
5 November 2004